

# APPLICATION OF INFORMATION TECHNOLOGY TO ANALYZE THE STRATEGIES USED FOR FORMATION OF VALUES

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## Abstract

The research has been developed with the objective to provide an analysis of the values education strategies used by teachers in public high schools at Monclova, Coahuila, México; to promote formation of values in their students. Participants were a total of 131 teachers of both sexes chosen randomly from seven different public high schools, with ages ranging between 21 and 65 years. Through field research and descriptive documentary, it was found that the strategies used by teachers are: self-regulation of behavior and values clarification. To conclude, any attempt to values education will only succeed if it does occur under certain conditions as an open dialogue climate, an appropriate methodology and most importantly, the teacher must estimate values, feel them, practice them, and have the desire above all of transmitting them.

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**Keywords:** Education, values, strategies, formation

## Introduction

Socialization occurs to people in two stages: in the family and at school. In the family this is habitually developed during childhood. One of its characteristics is the affective load with which the contents are transmitted and the identification of the world just as the adults present it. This is not universal nor remains static. At school, individual already socialized to new sectors of the objective world of society (Fragoso, 2007).

The family and the school are responsible for the education in values. Educational institutions are responsible for this formative process, "by the mere fact that children and youth participate in an institution in which they build their social identity as students for many years of their life" (Arellano, 2010 cited in Magendzo, Donoso and Rhodes, 1997).

It is important to emphasize that education must fully train students not only providing a preparedness of academic knowledge, but forming their personality and promoting the full growth, integral values and culture among others. Is in education, where the wealth and potential are to make positive changes for life in the population, when changing or fortifying the life habits of a student, his values about health and environment, as like his rights and obligations (Flores and Zamora, 2009).

According to Diaz (2006) and Esquivel (2009), the task of education in values requires for all members of the institution coherency and credibility; i.e. consistency between what is said and done. You can hardly form an attitude in a school environment immersed in contradiction, when the set of teachers and the school institution perform behavior contrary to those values of citizenship, tolerance, and respect for others.

The objective of this research is to identify the strategies used by teachers in public high schools at Monclova, Coahuila, México to promote the formation of values in students.

### **Methodology**

This research was documentary and of descriptive type field. Documentary when collecting information and performing an analysis on what the Secretariat of Public Education, (in Spanish *Secretaría de Educación Pública, SEP*), demands the high school teachers nationwide to work on the forming of values in their students. On the other hand it is considered a field study, since the information was collected directly from reality under investigation.

Educational institutions to conduct this investigation were seven public high schools randomly selected.

### **Sample of Teachers**

The study population in the 2011- 2012 school year, regarding teachers who give classes in high schools from the entity of Monclova, Coahuila, is 628. This information was obtained from The Department of Education of Coahuila, (in Spanish *Secreatría de Educación de Coahuila, SEDU*)

The size of the final probabilistic sample was obtained using the Decision Analyst STATS<sup>TM</sup> 2.0 Software, the characteristics shown in Table 1.

Table 1. Characteristics of the probabilistic sample of teachers

Characteristics	Numerical value
Universe Size	628
Maximum Mistake	6% - 7%
Estimated Percentage of the Sample	50%
Confidence Level	93%
Sample Size	131

Source: Own elaboration.

Is worth mentioning that the sample size wasn't of 238 teachers due to the following:

a) There were difficulties because many teachers wouldn't want to take the questionnaire. At that time, the changes in the basic education reform were starting.

b) For time matters, because much time was invested in the final sample obtained.

The definitive sample of teachers to which the questionnaires was applied is a total of 131, with a confidence level of 93%.

The 62.3% are females teachers and 37.7% are male teachers. In relation to the age of the teachers is in the range of 21 to 65 years. Regarding the education level of the teachers, 1.6% has a doctorate, 9.8% have a master, 80.5% have a bachelor, 6.5% have a technical career, and 1.6% has a specialty.

Table 2 shows the characteristics of the actual sample size of teachers that was used in the research. This was obtained using Netquest: Samples Calculator.

Table 2. Characteristic of the Actual Sample of Teachers

Characteristics	Numerical value
Universe Size	628
Maximum Mistake	6% - 7%
Estimated Percentage of the Sample	50%
Confidence Level	93%
Sample Size	131

Source: Own elaboration.

### Selecting the Instrument

In this research a questionnaire was drawn up, for an evaluation of the strategies used by teachers to form their students in values as established by the Secretariat of Public Education. This instrument is based on the program of Civics and Ethics and in the Formative Journey of Civics and Ethics Education itself, and consists of 20 questions.

Valdés (2000) mentions that teachers evaluations are not to project their reasonable limitations or deficiencies of the education system; but is taking a new style, climate, and a horizon of shared reflection to optimize and enable real opportunities for professional development for a generation

of teachers of innovative cultures in schools.

The scale used for the questionnaire was of Likert type.

### Validity of the Instrument

To validate the data collection instrument variable, The Formation of Values and Strategies, used by teachers were analyzed. To determine the reliability of the instrument applied to the teachers the Cronbach's alpha coefficient (Table 3) was calculated using the SPSS Statistics 17.0.

Table 3. Reliability-Questionnaire for teachers and teachers

Cronbach's Alpha	0.876
Number of items	20

Source: Own elaboration

### Data preparation

The information obtained from the questionnaire was first captured in Microsoft ® Office Excel version 2007, and then exported to SPSS Statistics 17.0 where the data was coded and the statistical analysis was realized.

### Results

The strategies used by teachers for training in values according to the Secretariat of Public Education (*SEP*) are presented in Table 4, including the average and standard deviation.

Table 4. Strategies used by teachers in high schools

Strategies	Average	Standard deviation
Discussion of Moral Dilemmas Strategy	3.63	0.974
Case Study Strategy	3.59	0.938
Critical Comment Strategy	3.56	1.039
Values Clarification Strategy	3.67	0.884
Values Analysis and Critical Analysis of Reality Strategy	3.82	0.885
Autoregulation of Behavior Strategy	3.96	0.830

Source: Own elaboration

Next, in Table 5 it shows how the strategy of Discussion of Moral Dilemmas is used by teachers, for training in values. It is observed that 37.4% of teachers use it most of the time, and only 19.1% always use it.

Table 5. Using the Discussion of Moral Dilemmas Strategy

<b>Scale</b>	<b>Frequency</b>	<b>Percentage</b>
Never	4	3.1
Most of the time no	9	6.9
Sometimes	43	32.8
Most of the time	49	37.4
Always	5	19.1
Missing Data	1	0.8
Total	131	100

Note: Missing data refers to a question not answered or answered with more than two response scales.

Source: Own elaboration

In Table 6 we can see the use of Case Study Strategy which shows that the highest percentage of 37.4% indicates that teachers use it sometimes, while a 35.1% uses it most of the time.

Table 6. Using the Case Study Strategy

<b>Scale</b>	<b>Frequency</b>	<b>Percentage</b>
Never	3	2.3
Most of the time no	9	6.9
Sometimes	49	37.4
Most of the time	46	35.1
Always	23	17.6
Missing Data	1	0.8
Total	131	100

Note: Missing data refers to a question not answered or answered with more than two response scales.

Source: Own elaboration

In Table 7 the Critical Comment Strategy is presented, showing that it is used in 38.2% by teachers and only 18.3% is always used.

Table 7. Using the Critical Comment Strategy

<b>Scale</b>	<b>Frequency</b>	<b>Percentage</b>
Never	5	3.8
Most of the time no	15	11.5
Sometimes	37	28.2
Most of the time	50	38.2
Always	24	18.3
Missing Data	0	0
Total	131	100

Note: Missing data refers to a question not answered or answered with more than two response scales.

Source: Own elaboration

Presented in Table 8 is the using Values Clarification Strategy, it is observed that 44.3% of teachers use it most of the time in class.

Table 8. Using the Values Clarification Strategy

Scale	Frequency	Percentage
Never	2	1.5
Most of the time no	9	6.9
Sometimes	40	30.5
Most of the time	58	44.3
Always	21	16.0
Missing Data	1	0.8
Total	131	100

Note: Missing data refers to a question not answered or answered with more than two response scales.

Source: Own elaboration

The Table 9 presents the use of Values Analysis and Critical Analysis of Reality Strategy, showing that teachers apply it in their classes a 38.9% most of the time.

Table 9. Using the Values Analysis and Critical Analysis of Reality Strategy

Scale	Frequency	Percentage
Never	1	0.8
Most of the time no	6	4.6
Sometimes	40	30.5
Most of the time	51	38.9
Always	32	24.4
Missing Data	1	0.8
Total	131	100

Note: Missing data refers to a question not answered or answered with more than two response scales.

Source: Own elaboration

The use of Autoregulation of Behavior Strategy is presented in Table 10, which shows that it is used by teachers in 46.6% most of the time and only 26.7% always used.

Table 10. Using the Autoregulation of Behavior Strategy

Scale	Frequency	Percentage
Never	1	0.8
Most of the time no	4	3.1
Sometimes	29	22.1
Most of the time	61	46.6
Always	35	26.7
Missing Data	1	0.8
Total	131	100

Note: Missing data refers to a question not answered or answered with more than two response scales.

Source: Own elaboration

## Conclusion

According to the results obtained during the research conducted among 131 teachers imparting classes in public high schools in Monclova,

Coahuila; it was found that there are six strategies that teachers have to be used on the formation of values in their students. These six strategies were established by the Secretariat of Public Education.

It is concluded that the strategies used by high school teachers are: Self-regulation of Behavior Strategy in a 44.6% and Values Clarification Strategy in a 44.3%.

To conclude, it is important to mention that any attempt to values education will not succeed if it does not occur under certain conditions as an open dialogue climate, an appropriate methodology, and most importantly the teacher must know the values, estimate them, feel them, practice them, and have the desire to transmit them.

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